

Malawi - Environmental and Natural Resource Management

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Overview

Identification

COUNTRY

Malawi

EVALUATION TITLE

Environmental and Natural Resource Management

EVALUATION TYPE

Independent Evaluation

ID NUMBER

DDI-MCC-MWI-IE-ENERGY-2018-v01

Overview

ABSTRACT

The WSM activity impact evaluation will include an interrupted time series (ITS) analysis to estimate impacts of the activity on the operations and productivity of the hydropower plants. We will also conduct a qualitative implementation analysis.

The performance evaluations of the ENRM and SGEF grant facility and the Environmental Trust will examine activity implementation, achievement of results, and longer term sustainability.

The performance evaluation of the ENRM and SGEF grants will include in-depth qualitative case studies with five grantees to examine activity implementation, changes in sustainable land management practices, changes in gender roles and household decision-making, and sustainability of results.

The mixed-methods evaluation of the ENRM Project will determine how the overall project and individual activities help to improve the efficiency of hydropower generation and reduce costly generation disruptions. We will conduct a remote sensing analysis to examine land use changes over time in the Shire River Basin. We will also model how changes in land use management affect sedimentation rates in the Shire using the Soil and Water Assessment Tool.

EVALUATION METHODOLOGY

Interrupted Time Series, Other (Performance Evaluation)

UNITS OF ANALYSIS

Community, administrative units, other

KEYWORDS

ENRM, WSM, SGEF, Malawi, Malawi Compact, Environmental Trust, Land Management, Shire River, Hydroelectric, Hydropower, River Sedimentation, Power, Environmental and Natural Resource Management, Erosion, Conservation Agriculture, Tree Planting, Forest Management

Coverage

GEOGRAPHIC COVERAGE

The WSM activity takes place at the Nkula and Kapichira power stations and at the Liwonde barrage along the Shire River in Malawi. The ENRM and SGEF activities take places in Shire River Basin sub catchment areas in 6 districts in Malawi: Neno, Mangochi, Machinga, Blantyre, Balaka, and Ntcheu.

UNIVERSE

ENRM and SGEF grant staff and grant beneficiaries; EGENCO staff at Nkula, Kapachiri, and the Liwonde barrage; Environmental Trust staff

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Mathematica Policy Research	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Mathematica Policy Research	Mathematica		Independent Evaluator

DATE OF METADATA PRODUCTION

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DDI DOCUMENT VERSION

Version 01

DDI DOCUMENT ID

DDI-MCC-MWI-IE-ENERGY-2018-v01

MCC Compact and Program

COMPACT OR THRESHOLD

Malawi Compact

PROGRAM

The Environmental and Natural Resources Management (ENRM) Project works to reduce costly disruptions and increase the efficiency of hydropower generation by mitigating aquatic weed growth and sedimentation in the Shire River Basin. It is comprised of three main activities: (1) The Weed and Sediment Management (WSM) activity involves procuring and using mechanical equipment to reduce sedimentation and aquatic weed infestation at the primary hydro-generation sites along the Shire; (2) the ENRM activity provides grants to projects designed to reduce soil erosion by improving land management activities in high-priority catchment areas; and (3) the Social and Gender Enhancement Fund (SGEF) activity complements the ENRM activity by targeting women and vulnerable groups to improve their economic and social rights and their decision-making power within their households and communities; SGEF also works with men who have limited control of resources in a matrilineal society. In addition, the ENRM activity, a part of the ENRM Project, seeks to establish an environmental trust to serve as a sustainable organization to continue funding ENRM and SGEF activities after the compact closes.

MCC SECTOR

Energy (Energy)

PROGRAM LOGIC

The ENRM Project addresses the problem of sedimentation and weed infestation in the Shire River in three ways: (1) removing weed and sediments near hydroelectric power plants (WSM activity); (2) combating the root causes of soil runoff in the Shire by improving sustainable land management (ENRM and SGEF activities); and (3) planning for long-term investments in behavior change by establishing an environmental trust. These three interventions encompass the project's theory of change, whereby: if weeds are removed and sedimentation is reduced, then hydropower generators will clog up less frequently and have sufficient levels of water to generate power, resulting in more efficient operation with fewer power outages; if community interventions are implemented, then households and communities will be better equipped to improve land use and watershed management practices, thus decreasing siltation and erosion in the project area; if an environmental trust is set up, then further initiatives and organizations can be funded, thereby leading to the sustained improvement of better land use practices. Outcomes from these activities support the Compact's goal of reducing poverty through sustainable and equitable economic growth by increasing the competitiveness of Malawi's agricultural, commercial and industrial sectors.

PROGRAM PARTICIPANTS

The WSM activity works with EGENCO staff, including power plant operators who will be maintaining and using the new equipment. The ENRM and SGEF activities work with interested residents of the targeted sub-catchment areas of the Shire River Basin, particularly farmers.

Sampling

Study Population

ENRM and SGEF grant staff and grant beneficiaries; EGENCO staff at Nkula, Kapachiri, and the Liwonde barrage;
Environmental Trust staff

Questionnaires

No content available

Data Collection

Data Collectors

Name	Abbreviation	Affiliation
Kadale Consultants Ltd.		

Data Processing

No content available

Data Appraisal

No content available